

Year 7

Accomplished

Number

I understand place value in decimal numbers.
I can order decimals and negative numbers.
I can multiply and divide by powers of ten.
I can add, subtract, multiply and divide negative numbers.
I can use appropriate mental and written methods to add and subtract decimals.
I can interpret and use a calculator effectively.
I can do calculations in the correct order.
I can use mental and written methods of multiplication and division.
I can use a calculator for a range of calculations.
I can find squares and square roots of whole numbers with and without a calculator.
I can use factors and multiples to find the HCF and LCM of numbers.
I can write a whole number as the product of its prime factors.
I can use tests of divisibility to find factors and to test for prime numbers.
I can use prime factors to find the HCF and LCM of two numbers.
I can use fraction notation and simplify fractions.
I can add and subtract fractions.
I can change between fractions, decimals and percentages.
I can find fractions and percentages of amounts.
I can round whole numbers and decimals.
I can find the outcome after a percentage increase or decrease.
I can multiply and divide decimal numbers using a range of mental methods.
I can multiply decimal numbers using the standard method.
I can divide decimal numbers using written methods including short division.
I can interpret the calculator display after doing a division.

Geometry and Measures

I can find the perimeter and area of a rectangle and triangle.
I can find the area of a parallelogram and trapezium.
I know, use and convert between metric and imperial units.
I can find the surface area and volume of a cuboid.
I know and use facts about the angles around a point, on a straight line and in a right angle.
I know and use facts about angles in triangles and quadrilaterals.
I know and use facts about angles that are formed when a line intersects parallel lines.
I can name and recognise properties of different types of triangles, quadrilaterals and polygons.
I can draw and describe reflections, rotations and translations.
I can recognise and describe reflectional symmetry and rotational symmetry.
I can draw and describe enlargements that use positive whole number scale factors.
I can make tessellations by reflecting, rotating and translating a shape.
I can construct angle bisectors and perpendicular bisectors.
I can construct triangles accurately.
I can describe a locus of a moving point and draw it accurately.
I can use and construct scale drawings.
I can name and describe 3D solids.
I can draw plans, elevations and nets of 3D solids.

Algebra

I can use letter symbols, collect like terms and expand brackets.
I can use and derive a formula.
I can substitute numbers into a range of expressions.
I can simplify expressions that involve brackets, powers and division.
I can use inverse operations to solve one-step and two-step equations.
I can solve equations with brackets and with an unknown on both sides.
I can write equations to describe different situations and then solve them.
I can use a rule to find the next term of a sequence.
I can use and find a term-to-term rule of a sequence.
I can use and find the rule for the nth term of a sequence.
I can find a formula to fit a sequence of patterns.
I can plot coordinates, including on negative axes.
I can plot and recognise graphs for horizontal and vertical lines.

I can plot straight-line graphs.
I understand graphs which describe real-life situations including time series.

Ratio, Proportion and Rates of Change

I can use fractions, decimals and percentages to describe proportions.
I can find the value of quantities that are directly proportional to each other.
I can simplify and use ratios.
I can divide a quantity into a given ratio.
I know how to find and use ratios and proportions in problems.

Probability

I can describe probabilities using words, fractions, decimals and percentages.
I can find probabilities of events which are equally likely to happen.
I know what 'mutually exclusive' events are and find their probabilities.
I can use experiments to find the experimental probability of an event.
I can compare results using theoretical and experimental probabilities.
I understand and can use Venn diagrams to find probabilities.

Statistics

I can recognise and describe different kinds of data.
I can find the mean, median, mode and range for raw data and data in a frequency table.
I can construct and understand different types of bar charts and pie charts.
I can create suitable data collection sheets.
I can write questions which are clear, unbiased and easy to answer.
I can collect discrete and continuous data in a grouped frequency table and find the modal class.
I can compare sets of data.

Skilled

Number

I understand place value in decimal numbers.
I can order decimals and negative numbers.
I can multiply and divide by powers of ten.
I can add, subtract, multiply and divide negative numbers.
I can use appropriate mental and written methods to add and subtract decimals.
I can interpret and use a calculator effectively.
I can do calculations in the correct order.
I can use mental and written methods of multiplication and division.
I can use a calculator for a range of calculations.
I can find squares and square roots of whole numbers with and without a calculator.
I can use factors and multiples to find the HCF and LCM of numbers.
I can write a whole number as the product of its prime factors.
I can use tests of divisibility to find factors and to test for prime numbers.
I can use prime factors to find the HCF and LCM of two numbers.
I can use fraction notation and simplify fractions.
I can add and subtract fractions.
I can change between fractions, decimals and percentages.
I can find fractions and percentages of amounts.
I can round whole numbers and decimals.
I can find the outcome after a percentage increase or decrease.
I can multiply and divide decimal numbers using a range of mental methods.
I can multiply decimal numbers using the standard method.
I can divide decimal numbers using written methods including short division.
I can interpret the calculator display after doing a division.

Geometry and Measures

I can find the perimeter and area of a rectangle and triangle.
I can find the area of a parallelogram and trapezium.

I know, use and convert between metric and imperial units.
I can find the surface area and volume of a cuboid.
I know and use facts about the angles around a point, on a straight line and in a right angle.
I know and use facts about angles in triangles and quadrilaterals.
I know and use facts about angles that are formed when a line intersects parallel lines.
I can name and recognise properties of different types of triangles, quadrilaterals and polygons.
I can draw and describe reflections, rotations and translations.
I can recognise and describe reflectional symmetry and rotational symmetry.
I can draw and describe enlargements that use positive whole number scale factors.
I can make tessellations by reflecting, rotating and translating a shape.
I can construct angle bisectors and perpendicular bisectors.
I can construct triangles accurately.
I can describe a locus of a moving point and draw it accurately.
I can use and construct scale drawings.
I can name and describe 3D solids.
I can draw plans, elevations and nets of 3D solids.

Algebra

I can use letter symbols, collect like terms and expand brackets.
I can use and derive a formula.
I can substitute numbers into a range of expressions.
I can simplify expressions that involve brackets, powers and division.
I can use inverse operations to solve one-step and two-step equations.
I can solve equations with brackets and with an unknown on both sides.
I can write equations to describe different situations and then solve them.
I can use a rule to find the next term of a sequence.
I can use and find a term-to-term rule of a sequence.
I can use and find the rule for the n th term of a sequence.
I can find a formula to fit a sequence of patterns.
I can plot coordinates, including on negative axes.
I can plot and recognise graphs for horizontal and vertical lines.
I can plot straight-line graphs.
I understand graphs which describe real-life situations including time series.

Ratio, Proportion and Rates of Change

I can use fractions, decimals and percentages to describe proportions.
I can find the value of quantities that are directly proportional to each other.
I can simplify and use ratios.
I can divide a quantity into a given ratio.
I know how to find and use ratios and proportions in problems.

Probability

I can describe probabilities using words, fractions, decimals and percentages.
I can find probabilities of events which are equally likely to happen.
I know what 'mutually exclusive' events are and find their probabilities.
I can use experiments to find the experimental probability of an event.
I can compare results using theoretical and experimental probabilities.
I understand and can use Venn diagrams to find probabilities.

Statistics

I can recognise and describe different kinds of data.
I can find the mean, median, mode and range for raw data and data in a frequency table.
I can construct and understand different types of bar charts and pie charts.
I can create suitable data collection sheets.
I can write questions which are clear, unbiased and easy to answer.

	<p>I can collect discrete and continuous data in a grouped frequency table and find the modal class.</p> <p>I can compare sets of data.</p>
<p>Competent</p>	<p>Number</p> <p>I can write numbers in words and figures.</p> <p>I can arrange decimal numbers in order.</p> <p>I can multiply and divide by 10, 100 and 1000.</p> <p>I can arrange negative numbers in order.</p> <p>I can add and subtract using negative numbers.</p> <p>I can add and subtract using mental, written and calculator methods.</p> <p>I can use fractions to describe parts of a whole.</p> <p>I can simplify fractions and find equivalent fractions.</p> <p>I can add and subtract fractions.</p> <p>I can change between fractions, decimals and percentages.</p> <p>I can find a fraction of a quantity.</p> <p>I can find a percentage of a quantity.</p> <p>I can round to whole numbers and to decimal places.</p> <p>I can calculate using the order of operations.</p> <p>I can multiply and divide whole numbers without a calculator.</p> <p>I can use a calculator for complex calculations.</p> <p>I can find factors and multiples of a number.</p> <p>I can find squares and square roots.</p> <p>I can recognise prime numbers.</p> <p>I can find the LCM and HCF of a pair of numbers.</p> <p>I can use mental methods to multiply and divide decimal numbers.</p> <p>I can use a standard written method to divide a decimal number.</p> <p>I can use a calculator for calculations.</p> <p>I can interpret the answer given on a calculator.</p> <p>Geometry and Measures</p> <p>I can read a scale on a measuring instrument (ruler).</p> <p>I can measure lengths in cm and mm.</p> <p>I can convert between metric units.</p> <p>I can calculate perimeters.</p> <p>I can calculate areas of: rectangle, triangles and parallelograms.</p> <p>I can calculate areas made from rectangles (composite shapes).</p> <p>I can recognise and name different types of angles.</p> <p>I can measure, and draw, angles to the nearest degree and lines to the nearest mm.</p> <p>I can use angle facts to work out unknown angles.</p> <p>I can recognise and name different types of triangles.</p> <p>I can recognise and name different types of quadrilaterals.</p> <p>I can draw shapes accurately using a ruler and protractor.</p> <p>I can reflect shapes in a mirror line.</p> <p>I can rotate shapes about a point.</p> <p>I can recognise and describe line and rotation symmetry.</p> <p>I can recognise and describe translations.</p> <p>I can tessellate shapes.</p> <p>I can draw triangles and quadrilaterals accurately using a ruler and protractor.</p> <p>I can use and construct a scale drawing.</p> <p>I know various 3D shapes and their names.</p> <p>I can count the vertices, faces and edges of a 3D shape.</p>

I can use isometric paper.
I can find the Surface area and volume of a shape made from centimetre cubes.

Algebra

I can use letters to stand for unknown values.
I can simplify an expression with one, or more, variables.
I can use a formula.
I can write a formula.
I can read, and plot, coordinates in four quadrants.
I can use a formula to complete a table of values.
I can plot points from a table of values.
I can draw a graph and use it to estimate and unknown value.
I can multiply and divide numbers and letters in algebra.
I can find the values needed to balance equations.
I can solve an equation by adding or subtracting on both sides.
I can solve an equation by multiplying or dividing on both sides.
I can solve two-step equations.
I can continue a sequence.
I can find a rule to describe a sequence of numbers.
I can use a rule to find the terms in a sequence.
I can generate sequences from patterns of shapes.

Ratio, Proportion and Rates of Change

I can write a proportion as a fraction or percentage.
I can increase or decrease two quantities using direct proportion.
I can use ratio to compare two quantities.
I can simplify a ratio.
I can solve problems involving ratio and proportion.

Probability

I can use words to describe different probabilities.
I can know the meaning of the words trial, outcome and event.
I can use the scale 0 to 1 for placing probabilities.
I can use equally likely outcomes to find a theoretical probability.
I can use an experiment to estimate an experimental probability.
I can identify a set.
I can complete and interpret a Venn diagram.

Statistics

I can understand and draw different kinds of bar chart.
I can understand pie charts.
I can understand and draw line graphs.
I can find averages and range from a list of data.
I can collect data using tally charts and frequency tables.
I can compare data from lists or represented in diagrams.

Improving

Number

I can use place value and decimal notation in different context, including money.
I can compare and order whole numbers.
I can add decimals using mental and written methods.
I understand and can order negative numbers in the context of temperature.
I can round and number to the nearest 10, 100, 1000.
I can use and estimate to check a result.
I can use the order of operations.
I can use fractions to describe parts of a whole, including improper fractions.
I can identify equivalent fractions.
I can find fractions of a quantity.
I can calculate simple percentages, including problems involving money.
I can express a proportion as a fraction, a decimal or a percentage.
I can use mental methods of addition and subtraction.
I can use efficient written methods to add and subtract whole numbers.
I can recognise and list factors and multiples.
I can use simple tests of divisibility.
I can recognise squares of numbers up to 10×10 .
I know my multiplication facts up to 12×12 .
I can multiply by 10 and 100.
I can multiply whole numbers using mental and written methods.
I can divide whole numbers using mental and efficient written methods.
I can use a calculator and interpret the display in different contexts, including money.

Geometry and Measures

I can measure lengths in centimetres and millimetres.
I can read and interpret scales in different contexts, including time.
I can classify 2D shapes by their properties.
I can calculate the perimeter of simple shapes.
I can calculate or estimate the area of a shape by counting squares.
I can choose and use standard metric units of measure.
I can construct and interpret scale drawings.
I can estimate angles and use a protractor to measure them.
I can distinguish between acute, obtuse and reflex angles.
I can use the sum of angles at a point, on a straight line and in a triangle.
I can recognise vertically opposite angles.
I can recognise parallel and perpendicular lines.
I can classify triangles by their properties.
I can find missing angles in a triangle.
I can understand and use the points of a compass.
I can identify lines of symmetry in a 2D shape.
I can transform a shape by reflection in a mirror line.
I can transform a shape by translation and describe a translation.
I can transform a shape by rotation about a point.
I can create tessellations using reflections, rotations and translations.
I can recognise and name common 3D shapes.
I can construct simple nets of 3D shapes.
I can use 2D representation to visualise 3D shapes.
I can use a protractor to measure and draw angles.
I can use a ruler and protractor to construct a triangle.
I know the parts of a circle.

Algebra

I can use letters to represent unknown numbers.

I can simplify algebraic expressions by collecting like terms.
I can substitute whole numbers into expressions and formulae.
I can derive a simple formula.
I can recognise and use formulae.
I can identify and plot coordinates in all four quadrants.
I can construct and interpret line graphs in context.
I can represent functions as sequences of operations.
I can understand and use inverse operations.
I can use letters to represent unknown numbers.
I can construct and solve simple equations.
I can solve two step equations.
I can find patterns and sequences of numbers.
I can describe a sequence using a rule to find the next term.
I can generate terms in sequence using a rule.
I can use negative numbers in a sequence.

Ratio, Proportion and Rates of Change

I can write and use ratios and proportions.
I can solve simple problems involving ratio and proportion.
I can solve arithmetic problems in context.

Probability

I can use the vocabulary and ideas of probability, drawing on experience.
I can understand and use the probability scale from 0 to 1.
I can sort objects using a Venn diagram.

Statistics

I can organise small sets of data from surveys and experiments.
I can solve problems by interpreting data in lists and tables.
I can construct and interpret statistical diagrams, including pictograms, bar charts, pie charts and line graphs.
I can calculate statistics for small sets of data, including the mode, median and range.

Number

I can use place value and decimal notation in different context, including money.
I can compare and order whole numbers.
I can add decimals using mental and written methods.
I understand and can order negative numbers in the context of temperature.
I can round and number to the nearest 10, 100, 1000.
I can use and estimate to check a result.
I can use the order of operations.
I can use fractions to describe parts of a whole, including improper fractions.
I can identify equivalent fractions.
I can find fractions of a quantity.
I can calculate simple percentages, including problems involving money.
I can express a proportion as a fraction, a decimal or a percentage.
I can use mental methods of addition and subtraction.

Emerging

I can use efficient written methods to add and subtract whole numbers.
I can recognise and list factors and multiples.
I can use simple tests of divisibility.
I can recognise squares of numbers up to 10×10 .
I know my multiplication facts up to 12×12 .
I can multiply by 10 and 100.
I can multiply whole numbers using mental and written methods.
I can divide whole numbers using mental and efficient written methods.
I can use a calculator and interpret the display in different contexts, including money.

Geometry and Measures

I can measure lengths in centimetres and millimetres.
I can read and interpret scales in different contexts, including time.
I can classify 2D shapes by their properties.
I can calculate the perimeter of simple shapes.
I can calculate or estimate the area of a shape by counting squares.
I can choose and use standard metric units of measure.
I can construct and interpret scale drawings.
I can estimate angles and use a protractor to measure them.
I can distinguish between acute, obtuse and reflex angles.
I can use the sum of angles at a point, on a straight line and in a triangle.
I can recognise vertically opposite angles.
I can recognise parallel and perpendicular lines.
I can classify triangles by their properties.
I can find missing angles in a triangle.
I can understand and use the points of a compass.
I can identify lines of symmetry in a 2D shape.
I can transform a shape by reflection in a mirror line.
I can transform a shape by translation and describe a translation.
I can transform a shape by rotation about a point.
I can create tessellations using reflections, rotations and translations.
I can recognise and name common 3D shapes.
I can construct simple nets of 3D shapes.
I can use 2D representation to visualise 3D shapes.
I can use a protractor to measure and draw angles.
I can use a ruler and protractor to construct a triangle.
I know the parts of a circle.

Algebra

I can use letters to represent unknown numbers.
I can simplify algebraic expressions by collecting like terms.
I can substitute whole numbers into expressions and formulae.
I can derive a simple formula.
I can recognise and use formulae.
I can identify and plot coordinates in all four quadrants.
I can construct and interpret line graphs in context.
I can represent functions as sequences of operations.
I can understand and use inverse operations.
I can use letters to represent unknown numbers.
I can construct and solve simple equations.
I can solve two step equations.
I can find patterns and sequences of numbers.
I can describe a sequence using a rule to find the next term.
I can generate terms in sequence using a rule.

I can use negative numbers in a sequence.

Ratio, Proportion and Rates of Change

I can write and use ratios and proportions.

I can solve simple problems involving ratio and proportion.

I can solve arithmetic problems in context.

Probability

I can use the vocabulary and ideas of probability, drawing on experience.

I can understand and use the probability scale from 0 to 1.

I can sort objects using a Venn diagram.

Statistics

I can organise small sets of data from surveys and experiments.

I can solve problems by interpreting data in lists and tables.

I can construct and interpret statistical diagrams, including pictograms, bar charts, pie charts and line graphs.

I can calculate statistics for small sets of data, including the mode, median and range.

Year 8

Number

- I can use divisibility tests to find factors and identify primes.
- I can find and use the LCM and HCF of two numbers using prime factors.
- I can find square roots and cube roots.
- I can use, multiply and divide numbers written in index form.
- I can round numbers to a given power of 10 and use rounding to make estimates.
- I can use trial-and-improvement to find square and cube roots.
- Convert between decimals and fractions and order them.
- I can add and subtract fractions with different denominators, including mixed numbers.
- I can multiply and divide fractions.
- I can calculate percentages of an amount and percentage changes.
- I can calculate an original amount from the result of a percentage change.
- I can convert between percentages, fractions and decimals.
- I can use the rules of arithmetic with negative numbers.
- I can calculate with positive and negative powers of ten.
- I can perform mental addition, subtraction, multiplication and division.
- I can use standard written methods for addition and subtraction with decimals.
- I can perform mental multiplication and division.
- I can use standard written methods for addition, subtraction, multiplication and division.
- I can use a calculator to calculate with powers, roots, brackets and fractions.
- I can interpret the results of a calculation in context.
- I can apply the BIDMAS rules to do a calculation in the correct order.

Geometry and Measures

- I can use appropriate metric units to measure length, mass, capacity and area.
- I can convert between metric and Imperial units.
- I can read and interpret scales on a range of measuring instruments.
- I can calculate the area of a rectangle, a triangle, a parallelogram and a trapezium.
- I know the names of parts of a circle.
- I can calculate the circumference and area of a circle.
- I can reason geometrically using the properties of angles at a point, on a line, intersecting lines and parallel lines.
- I can recognise the different types of triangles and quadrilaterals and use their properties.
- I can recognise the different types of polygons and calculate interior and exterior angles.
- I can identify congruent shapes.
- I can carry out and specify rotations, reflections and translations.
- I can carry out combinations of transformations.
- I can identify all the symmetries of shapes.
- I can carry out and specify an enlargement.
- I can use and interpret scale drawings.
- I can construct a unique triangle given the sufficient information on the size of its angles and sides.
- I can construct bisectors and perpendiculars.
- I can construct simple loci.
- I can use three figure bearings.
- I can name 3D shapes and draw their nets.
- I can draw plans and elevations and isometric drawings.
- I can calculate the surface area of a prism.
- I can calculate the volume of a prism.

Algebra

- I can use index notation, including negative indices, and basic index laws.

Accomplished

I can simplify algebraic expressions by collecting like terms.
I can expand single brackets.
I can factorise an expression by taking out a common factor.
I can derive and substitute into a formula.
I can change the subject of a formula.
I can add and subtract simple algebraic fractions.
I can plot the graph of a linear function and use the equation of a straight line.
I can plot the graph of a non-linear function.
I can find the midpoint of a pair of coordinates.
I can plot the graph of an implicit function.
I can plot and interpret graphs of real life situations.
I can plot and interpret time series graphs.
I can solve linear equations involving brackets.
I can solve linear equations where the unknown appearing more than once.
I can solve linear equations with negative numbers.
I can solve linear equations involving fractions.
I can use trial and improvement methods to solve equations.
I can describe a linear sequence using a term-to-term rule.
I can describe a linear sequence using a position-to-term rule.
I can recognise and describe geometric sequences.
I can describe a general sequence using a recursive formula.

Ratio, Proportion and Rates of Change

I can simplify and compare ratios.
I can divide a quantity in a given ratio.
I can use the unitary method to solve direct proportion problems.
I can solve ratio and proportion problems.
I can compare proportions.
I can describe quantities in direct proportion using an equation or a graph.

Probability

I can systematically list the outcomes for combined events.
I can use a tree diagram to list outcomes and calculate probabilities.
I can identify mutually exclusive events and calculate their probabilities.
I can estimate probabilities using experiments and compare the results to theoretical models.
I can construct and use Venn diagrams to calculate probabilities.

Statistics

I understand different types of data and how they may be analysed.
I can analyse data in terms of frequency and averages.
I can draw statistical charts such as stem-and-leaf diagrams and pie charts.
I can analyse scatter diagrams and time-series data.
I can compare different types of statistical distributions.

Number

I can use divisibility tests to find factors and identify primes.
I can find and use the LCM and HCF of two numbers using prime factors.
I can find square roots and cube roots.
I can use, multiply and divide numbers written in index form.
I can round numbers to a given power of 10 and use rounding to make estimates.
I can use trial-and-improvement to find square and cube roots.
Convert between decimals and fractions and order them.
I can add and subtract fractions with different denominators, including mixed numbers.
I can multiply and divide fractions. I can calculate percentages of an amount and percentage changes.

I can calculate an original amount from the result of a percentage change.
I can convert between percentages, fractions and decimals.
I can use the rules of arithmetic with negative numbers.
I can calculate with positive and negative powers of ten.
I can perform mental addition, subtraction, multiplication and division.
I can use standard written methods for addition and subtraction with decimals.
I can perform mental multiplication and division.
I can use standard written methods for addition, subtraction, multiplication and division.
I can use a calculator to calculate with powers, roots, brackets and fractions.
I can interpret the results of a calculation in context.
I can apply the BIDMAS rules to do a calculation in the correct order.

Skilled

Geometry and Measures

I can use appropriate metric units to measure length, mass, capacity and area.
I can convert between metric and Imperial units.
I can read and interpret scales on a range of measuring instruments.
I can calculate the area of a rectangle, a triangle, a parallelogram and a trapezium.
I know the names of parts of a circle.
I can calculate the circumference and area of a circle.
I can reason geometrically using the properties of angles at a point, on a line, intersecting and parallel lines.
I can recognise the different types of triangles and quadrilaterals and use their properties.
I can recognise the different types of polygons and calculate interior and exterior angles for regular polygons.
I can identify congruent shapes.
I can carry out and specify rotations, reflections and translations.
I can carry out combinations of transformations.
I can identify all the symmetries of shapes.
I can carry out and specify an enlargement.
I can use and interpret scale drawings.
I can construct a unique triangle given the sufficient information on the size of its angles and lengths of its sides.
I can construct bisectors and perpendiculars.
I can construct simple loci.
I can use three figure bearings.
I can name 3D shapes and draw their nets.
I can draw plans and elevations and isometric drawings.
I can calculate the surface area of a prism.

I can calculate the volume of a prism.

Algebra

I can use index notation, including negative indices, and basic index laws.

I can simplify algebraic expressions by collecting like terms.

I can expand single brackets.

I can factorise an expression by taking out a common factor.

I can derive and substitute into a formula.

I can change the subject of a formula.

I can add and subtract simple algebraic fractions.

I can plot the graph of a linear function and use the equation of a straight line.

I can plot the graph of a non-linear function.

I can find the midpoint of a pair of coordinates.

I can plot the graph of an implicit function.

I can plot and interpret graphs of real life situations.

I can plot and interpret time series graphs.

I can solve linear equations involving brackets.

I can solve linear equations where the unknown appearing more than once.

I can solve linear equations with negative numbers.

I can solve linear equations involving fractions.

I can use trial and improvement methods to solve equations.

I can describe a linear sequence using a term-to-term rule.

I can describe a linear sequence using a position-to-term rule.

I can recognise and describe geometric sequences.

I can describe a general sequence using a recursive formula.

Ratio, Proportion and Rates of Change

I can simplify and compare ratios.

I can divide a quantity in a given ratio.

I can use the unitary method to solve direct proportion problems.

I can solve ratio and proportion problems.

I can compare proportions.

I can describe quantities in direct proportion using an equation or a graph.

Probability

I can systematically list the outcomes for combined events.

I can use a tree diagram to list outcomes and calculate probabilities.

I can identify mutually exclusive events and calculate their probabilities.

I can estimate probabilities using experiments and compare the results to theoretical models.

I can construct and use Venn diagrams to calculate probabilities.

Statistics

I understand different types of data and how they may be analysed.

I can analyse data in terms of frequency and averages.

I can draw statistical charts such as stem-and-leaf diagrams and pie charts.

I can analyse scatter diagrams and time-series data.

I can compare different types of statistical distributions.

<p style="text-align: center;">Competent</p>	<p>Number</p> <p>I can order and compare decimals. I can add, subtract, multiply and divide integers. I can identify and use multiples, factors and prime numbers. I can use tests for divisibility. I can find the prime factor decomposition of a number. I can find the highest common factor of two numbers. I can find the Lowest Common multiple of two numbers. I can identify and use square and cube numbers. I can identify and use square roots and cube roots. I can order and compare decimals. I can convert between fractions, decimals and percentages. I can order fractions. I can add and subtract fractions. I can find a fraction of a quantity. I can express one number as a fraction of another. I can calculate a percentage of an amount. I can express one number as a percentage of another. I can calculate percentage increase and decrease. I can round numbers to the nearest 10, 100, and 1000 to a given amount of decimal places. I can use a range of mental strategies for addition, subtraction, multiplication and division. I can multiply and divide by 10,100,1000, 0.1 and 0.01 I can solve problems by breaking them down into smaller steps using mental strategies. I can add, subtract, multiply and divide whole numbers and decimals using standard written methods. I can use the order of operations in order to carry out calculations. I can solve problems using standard written methods when adding, subtracting, multiplying and dividing whole numbers and decimals.</p> <p>Geometry and Measures</p> <p>I can use appropriate units to measure length, mass and capacity. I can convert between metric units of measurements. I can calculate the area and perimeter of a rectangle. I can calculate the perimeter and area of a triangle. I can calculate the area of a parallelogram and trapezium. I can use appropriate units for area and perimeter. I can calculate missing angle around a point and on a straight line. I can calculate missing angles in a triangle. I can find missing angles in parallel and intersecting lines. I can recognise quadrilaterals and know their properties. I can recognise and use properties of polygons. I know the meaning of the word congruent and recognise congruent shapes. I can reflect, rotate and translate 2D shapes. I can transform 2D shapes using a combination of transformations. I can recognise reflections and rotational symmetry. I can enlarge a 2D shape given a scale factor and from a given centre of enlargement.</p>

I can construct triangles and quadrilaterals accurately.
I can construct bisectors, perpendicular bisectors and perpendicular lines accurately.
I can use bearings to specify directions.
I can measure and construct angles involving bearings.
I can use scale drawings to represent real life objects.
I can recognise and name 3D shapes.
I can recognise nets of 3D shapes.
I can use isometric paper to draw 3D shapes.
I can draw plans and elevations of 3D shapes.
I can calculate surface area and volume of cuboids.
I can calculate the volume of prisms.

Algebra

I can substitute into simple algebraic expressions and formulae.
I can simplify by collecting like terms.
I can use indices to simplify expressions.
I can expand brackets.
I can construct formula for different situations.
I can draw a straight line given its equation by generating a table of values.
I can recognise equations of vertical, horizontal and sloping lines (using gradient and intercept).
I can interpret and draw real life graphs
I can construct and interpret simple line graphs from time series.
I can solve simple one step equations.
I can solve multi-step equations with an unknown on both sides.
I can solve equations involving fractions, using balancing and inverse operations.
I can solve equations with brackets.
I can solve real life equations.
I can find and use a term to term rule in a sequence.
I can find and use the position to term rule in a sequence.
I can find the n th term of a linear sequence.
I can use sequences in context and in real life situations.
I can recognise and describe geometric patterns.

Ratio, Proportion and Rates of Change

I can simplify ratio.
I can divide in a given ratio and use ratio in context.
I can solve problems using direct proportion.
I can use fractions, decimal and percentages to compare simple proportions and solve problems.

Probability

I can use diagrams and tables to record mutually exclusive outcomes.
I can find probabilities bases on equally likely outcomes.
I can calculate the probability of an event not happening from the probability that it does happen.
I can estimate probabilities by collecting data from an experiment.
I can compare theoretical probabilities and experimental probabilities.
I can use the language of sets and use sets to calculate probabilities.

	<p>Statistics</p> <p>I can draw pie charts. I can draw bar charts and frequency diagrams. I can calculate mean, median and mode from discrete and continuous data. I can construct and interpret scatter diagrams and identify types of correlation. I can draw and interpret stem and leaf diagrams.</p>
<p>Improving</p>	<p>Number</p> <p>I can order, add and subtract negative numbers. I can recognise and use multiples and factors. I can use a divisibility tests. I can recognise prime numbers. I can order decimals. I can round whole numbers and decimals. I can find squares and square roots. I can simplify equivalent fractions. I can use decimal conversions to order fractions. I can add and subtract fractions. I can find a fraction of a quantity. I can calculate percentages of amounts. I can convert fractions and decimals into percentages. I can use the order of operations, including brackets. I can use the column method to add and subtract whole numbers and decimals. I can use the standard method to multiply whole numbers. I can use long and short division. I can use written methods to solve problems. I can use a calculator to work out longer calculations. I can solve problems using addition, subtraction, multiplication and division. I can solve problems involving money using mental methods, written method or using a calculator.</p> <p>Geometry and Measures</p> <p>I can use, read and write standard metric units. I can convert between metric and imperial units. I can read measurements from scales. I can find the perimeter and area of a rectangle. I can calculate the area of shapes made from rectangles. I can use the sum of angles at a point and on a straight line to solve problems. I can recognise vertically opposite angles. I can classify triangles. I can use the facts about angles in a triangle to solve problems. I can recognise parallel and perpendicular lines. I can classify quadrilaterals. I can find reflections in mirror lines. I can recognise reflection and rotational symmetry. I can rotate shapes on a square grid through different angles. I can translate shapes. I can make tessellating patterns. I can measure and draw lines and angles accurately. I can construct a triangle given two sides and the included angles.</p>

I can construct a triangle given two angles and the included side.
I can draw and use simple scale drawings.
I can recognise and name 3D shapes.
I can use isometric drawings to visualise 3D shapes.
I can use nets of 3D shapes.
I can find the surface area of cubes and cuboids.
I can find the volume of a 3D shape by counting cubes.

Algebra

I can use symbols to make simple expressions.
I can substitute values into simple expressions.
I can simplify expressions by collecting like terms.
I can expand brackets.
I can substitute values into formulae
I can recognise and use formulae.
I can multiply and divide algebraic terms.
I can read and plot coordinates in all four quadrants.
I can use a table of values to draw a straight-line graph.
I can identify the equations of horizontal and vertical graph lines.
I can use real-life graphs and conversion graphs.
I can create and use formulae.
I can solve one-step equations using inverses and balancing.
I can form equations from word problems.
I can solve two step equations.
I can make equations from real situations.
I can find and use rules that describe sequences of numbers.
I can use position-to-term rules to generate sequences.
I can use sequences to solve real life problems.
I understand the connection between triangular numbers and square numbers

Ratio, Proportion and Rates of Change

I can simplify ratios.
I can divide amounts into ratios.
I can express one amount as a proportion of a whole.
I can recognise and use direct proportion.
I can compare proportions of amounts using fractions and percentages.

Probability

I understand and can use the probability scale from 0 to 1.
I can use vocabulary to describe the likelihood of events.
I can find probabilities based on equally likely outcomes.
I can use experiments to estimate probabilities.
I can use Venn diagrams to find probabilities.

Statistics

I can use frequency tables.
I can draw bar charts and pie charts.
I can find the mean, mode, median and range of a list of numbers.
I can find the mean, median and mode for data in a table.

Emerging

Number

- I can order, add and subtract negative numbers.
- I can recognise and use multiples and factors.
- I can use a divisibility tests.
- I can recognise prime numbers.
- I can order decimals.
- I can round whole numbers and decimals.
- I can find squares and square roots.
- I can simplify equivalent fractions.
- I can use decimal conversions to order fractions.
- I can add and subtract fractions.
- I can find a fraction of a quantity.
- I can calculate percentages of amounts.
- I can convert fractions and decimals into percentages.
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- I can use the standard method to multiply whole numbers.
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- I can use written methods to solve problems.
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